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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/529,734	03/30/2005	Seok Kyu Park	9988.218.00	1892

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EXAMINER

KO, STEPHEN K

ART UNIT	PAPER NUMBER
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1792

MAIL DATE	DELIVERY MODE
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11/12/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/529,734	PARK, SEOK KYU	
	Examiner	Art Unit	
	STEPHEN KO	1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 July 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11 September 2008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: "a bottom of the inner tub 4" is apparently should be written as "a bottom of the inner tub 6" (P.6, L.25).

Appropriate correction is required.

Claim Objections

2. Claim 13 is objected to because of the following informalities: Claim 13 recites limitation "wherein the washing water rising rises along an inside wall of..." (L.5-6 of claim 13) is apparently should be written as "wherein the washing water rises along an inside wall of...". Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 3-4 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 3 recites limitation "rotating the pulsator for mixing the first and second supplied washing water amount and the detergent with the

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laundry between the step of supplying washing water and detergent and the step of washing the laundry" (L.2-4 of claim 3) is not mentioned in the specification.

Claim 4 is rejected because of their dependency and failure to remove the ambiguity of parent claim

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 3-4, 7-8, and 11-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7. Claim 3 recites limitation "between the step of supplying washing water and detergent" (L. 3 of claim 3), which is not readily ascertainable since it is not clear whether the supplying washing water means supplying first washing water amount or supplying second washing water amount.

8. Claim 3 recites the limitation "the step of supplying washing water and detergent" in L. 3 of claim 3. There is insufficient antecedent basis for this limitation in the claim, since it is not defined in claim 1 whether the detergent is supplied with first washing water amount or second washing water amount.

9. Claims 7-8, 11 and 13-14 recite limitation "washing water" (Line 3-4 of claim 7; Line 4 of claim 8; Line 7 of claim 11; Line 4-5 of claim 13; and Line 5 of claim 14 respectively), which is not readily ascertainable since it is not clear whether the washing water means first washing water amount or second washing water amount. It is assumed to be first washing water amount for examination purpose.

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10. Claim 12 recites limitation “turning power supplied to the motor off for a present time period to rotate the motor in a rotation direction opposite to the rotation direction of the motor”, which is not readily ascertainable, since it is not clear how the motor can rotate in a rotation direction opposite to the rotation direction without power supply.

11. Claims 4 and 15-17 are rejected because of their dependency and failure to remove the ambiguity of parent claim.

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

14. Claims 1-2, 5, and 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thuruta et al (US 4,779,430) in view of Lyu et al (US 6,351,974).

Thuruta et al teach a washing process (col.5, L.57) comprising the steps of supplying cleanser (read as detergent, col.6, L.6), a water supply (2) (read as first washing water amount, Fig.10, #207, col.6, L.6), and water supply (3) (read as second

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washing water amount, Fig.10, #216, col.6, L.20) to an outer tank (Fig.1, #2, col.2, L.56) and drum (Fig.1, #11, col.3, L.28), wherein the drum is disposed in the outer tank and is configured for holding laundry, and wherein the water supply (2) and water supply (3) are determined base on a measured cloth amount (col.6, L.3-11); and washing the cloth by stirring or agitating (read as rotating a pulsator (Fig.1, #12) in the drum at a predetermined speed by a motor (Fig.1, #15), to wash the laundry, col.6, L.16-19), wherein the stirring or agitating occurs after completing the supplying of the water supply (2) and before the supply (3) (Fig.10, col.6, L.14-18).

Thuruta et al do not teach the step of rotating the inner tub and the pulsator at predetermined speed by a motor for washing laundry.

Lyu et al teach a method for washing laundry in a washing machine comprising the step of rotating the inner tub and pulsator at high speed (read as predetermined speed, col.5, L.65).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of Thuruta et al by adding a step of rotating the inner tub and the pulsator at high speed as mentioned in Lyu et al to obtain penetration washing (Lyu et al, col.6, L.4-5) generated by centrifugal force to wash the laundry by a centrifugal force.

For claim 2, note that Thuruta et al teach that the water supply (2) and water supply (3) are determined base on a measured cloth amount (Thuruta et al, col.6, L.3-11), wherein the water supply amount of the first rinsing water supply (3) may be one grade greater than the water supply amount of the water supply (2) (col.6, L.23-26).

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Note that the water supply (2) is, within the teaching of Thuruta et al, supplied to the drum since a water supply pipe (Fig.1, #18, col.3, L.16) supplies water into the drum through a water supply valve (Fig.1, #19, col.3, L.18) (col.3, L.16-18).

Regarding claim 5, Thuruta et al do not teach the steps of rotating the inner tub and the pulsator in one direction; stopping the inner tub and the pulsator; and rotating the inner tub and the pulsator in an opposite direction.

Lyu et al teach a method for washing laundry in a washing machine comprising the step of; repeatedly rotating the inner tub and the pulsator in regular and reverse rotations during a penetration washing (Col.7, L.1-2). Note that the inner tub and the pulsator have to stop for certain amount of time when there is a change of direction of rotations. Also note that the pulsator is formed as a unit with the inner tub, so the pulsator stops and rotates whenever the inner tub stops and rotates (Col.5, L.33-34).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the washing method of Thuruta et al as mentioned in Lyu et al to obtain improvement in washing efficiency.

Regarding claim 7, Thuruta et al do not teach the step of penetrating the laundry with washing water by a centrifugal force generated by rotation of the inner tub and the pulsator; wherein the washing water rising along an inside wall of the outer tub, and is introduced into the inner tub from a top of the inner tub.

Lyu et al teach a method for washing laundry in a washing machine comprising the step of having the washing water penetrating through between textile fabrics of laundry by a centrifugal force generated by the high speed rotation of the pulsator and

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the inner tub(col.5, L.65-67 and col.6, L.3-5); the washing water pumped upward along a space between the inner tub and the outer tub by centrifugal forces until the washing water hits the tub cover where the washing water introduced into the inner tub from the top of the inner tub again (Fig.3A, col.6, L.9-11).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the washing method of Thuruta et al as mentioned as Lyu et al to obtain improvement in washing efficiency.

Regarding claim 8, Thuruta et al do not teach the step of penetrating the laundry pushed onto an inside wall of the inner tub with the washing water by a centrifugal force generated by rotation of the inner tub and the pulsator; and stopping the inner tub and the pulsator, to let the laundry fall down onto the pulsator.

Lyu et al teach a method for washing laundry in a washing machine comprising the step of having the pulsator and the inner tub rotated at a high speed such that the laundry is pushed to the inside wall of the inner tub by rotation of the inner tub and the pulsator (col.6, L.59-61); and stopping the rotation of the inner tub and the pulsator such that the laundry is gathered to a central portion of the inner tub to hit with the pulsator (col.6, L.60-64). Note that the pulsator is formed as a unit with the inner tub, so the pulsator stops whenever the inner tub stops (Col.5, L.33-34).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the washing method of Thuruta et al as mentioned as Lyu et al in order to let the laundry to hit among the laundry or with the pulsator to improve washing efficiency.

For claim 9, note that washing the laundry is performed by stirring or agitating (2) (read as rotating the pulsator, Thuruta et al, Fig.10, #209, col.6, L.17-18).

15. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Thuruta et al (US 4,779,430) in view of Lyu et al (US 6,351,974) in further view of Sonoda et al (US 6,826,932).

Both Thuruta et al and Lyu et al do not teach a step of stopping the inner tub and the pulsator includes the step of supplying power to the motor while changing a polarity of the power at predetermined intervals repeatedly to offset an inertia of the motor for making the motor rotate in an opposite direction.

Sonoda et al teach a method of stopping a motor comprising a step of rotating the motor in a direction opposite to the direction of the rotation which the motor is in rotation (read as changing a polarity of the power, Col.5, L.19-21). Note that power has to be supplied to the motor in order to actuate motor.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the stopping the rotation of the motor of Thuruta et al and Lyu et al as mentioned in Sonoda et al to shorten a stoppage time for the inner tub and the pulsator.

16. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Thuruta et al (US 4,779,430) in view of Lyu et al (US 6,351,974) in further view of JP 2003-10587.

Both Thuruta et al and Lyu et al do not teach the step of rotating the pulsator includes the step of rotating the inner tub having no rotation force of the motor

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transmitted thereto together with the rotation of the pulsator in a direction opposite to the rotation direction of the pulsator by a principle of action-reaction with respect to the rotation of the pulsator.

JP 2003-10587 teaches a method for washing laundry in a washing machine wherein the step of rotating the pulsator includes the step of rotatively driving the agitation blade (read as pulsator, abstract) in such a manner that the tub (read as inner tub, abstract) is made free to rotate so that a reaction force reverse to the driving force of the agitation blade (read as pulsator, abstract; read as reaction force, abstract) is applied to spinning tub (read as inner tub, abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the step of rotating the pulsator of Thuruta et al and Lyu et al as mentioned in JP 2003-10587 to reduce damages to clothes and entanglement thereof with necessary washing force maintained (JP 2003-10587, abstract).

17. Claims 11 and 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thuruta et al (US 4,779,430) in view of Lyu et al (US 6,351,974) in further view of Park (WO 03/080916).

Thuruta et al teach a washing process (col.5, L.57) comprising the steps of supplying cleanser (read as detergent, col.6, L.6), a water supply (2) (read as first washing water amount, Fig.10, #207, col.6, L.6), and water supply (3) (read as second washing water amount, Fig.10, #216, col.6, L.20) to an outer tank (Fig.1, #2, col.2, L.56) and drum (Fig.1, #11, col.3, L.28), wherein the drum is disposed in the outer tank and is configured for holding laundry, and wherein the water supply (2) and water supply (3)

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are determined base on a measured cloth amount (col.6, L.3-11); and washing the cloth by stirring or agitating (read as rotating a pulsator (Fig.1, #12) in the drum at a predetermined speed by a motor (Fig.1, #15), to wash the laundry, col.6, L.16-19), wherein the stirring or agitating occurs after completing the supplying of the water supply (2) and before the supply (3) (Fig.10, col.6, L.14-18).

Thuruta et al do not teach the steps of rotating the inner tub and the pulsator in one direction; stopping the inner tub and the pulsator; and rotating the inner tub and the pulsator in an opposite direction.

Lyu et al teach a method for washing laundry in a washing machine comprising the step of; repeatedly rotating the inner tub and the pulsator in regular and reverse rotations during a penetration washing (Col.7, L.1-2). Note that the inner tub and the pulsator have to stop for certain amount of time when there is a change of direction of rotations. Also note that the pulsator is formed as a unit with the inner tub, so the pulsator stops and rotates whenever the inner tub stops and rotates (Col.5, L.33-34).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the washing method of Thuruta et al by adding the steps of rotating the inner tub and the pulsator in one direction; stopping the inner tub and the pulsator; and rotating the inner tub and the pulsator in an opposite direction as mentioned in Lyu et al to obtain improvement in washing efficiency.

Both Thuruta et al and Lyu et al do not teach rotating a pulsator for mixing the first washing water amount and the detergent with the laundry.

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Park teaches a method for washing laundry in a washing machine comprising the step of soaking a supplied washing water and a detergent with a laundry (P.11, L.29-30; P.12, L.4-5; P.12, L.14-16); and rotating an agitator (Fig.2, S41, P.12, L.12), which inherently mixes the supplied washing water and detergent with the laundry.

It would have been obvious to ordinary skill in the art at the time the invention was made to modify the method of Thuruta et al and Lyu et al to mix the supplied washing water and the detergent with the laundry as mentioned in Park such that the laundry can absorb the detergent and the washing water evenly to enhance the ability of the detergent.

Regarding claim 13, Thuruta et al and Park do not teach the step of penetrating the laundry with the washing water by a centrifugal force generated by rotation of the inner tub and the pulsator; and the washing water rising along an inside wall of the outer tub, and introduced into the inner tub from a top of the inner tub before or after the step of stopping the inner tub.

Lyu et al teach a method for washing laundry in a washing machine called penetration washing (col.6, L.4-5) comprising the step of; the washing water penetrating through between textile fabrics of laundry by a centrifugal force generated by the high speed rotation of the pulsator and the inner tub (col.5, L.65-67 and col.6, L.3-5), the washing water pumped upward along a space between the inner tub and the outer tub by centrifugal forces until the washing water hits the tub cover where the washing water introduced into the inner tub from the top of the inner tub again (Fig.3A, col.6, L.9-11). The penetration washing is preformed repeatedly in regular and reverse rotation (read

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as before or after the step of stopping the inner tub and pulsator, Col.7, L.1-2). Also note that the pulsator is formed as a unit with the inner tub, so pulsator stops whenever the inner tub stops (Col.5, L.33-34).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the washing method of Thuruta et al and Park as mentioned as Lyu et al to obtain improvement in washing efficiency.

Regarding claim 14, Thuruta et al and Park do not teach the step of penetrating the laundry pushed onto an inside wall of the inner tub with the washing water by a centrifugal force generated by rotation of the inner tub and the pulsator; and stopping the inner tub and the pulsator, to let the laundry fall down onto the pulsator before or after the step of stopping the inner tub.

Lyu et al teach a method for washing laundry in a washing machine called restoration circulation (col.6, L.56-58) comprising the step of the pulsator and the inner tub is rotated at a high speed such that the laundry is pushed to the inside wall of the inner tub by rotation of the inner tub and the pulsator (col.6, L.59-61); and stopping the rotation of the inner tub and the pulsator such that the laundry is gathered to a central portion of the inner tub to hit with the pulsator (col.6, L.60-64). Note that Restoration circulation washing is preformed repeatedly when the direction of rotation is changed between regular to reverse rotation (read as before or after the step of stopping the inner tub and pulsator, Col.7, L.1-4). Also note that the pulsator is formed as a unit with the inner tub, so the pulsator stops whenever the inner tub stops (Col.5, L.33-34).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the washing method of Thuruta et al and Park as mentioned as Lyu et al in order to let the laundry to hit among the laundry or with the pulsator to improve washing efficiency.

Regarding claim 15, Thuruta et al and Park do not teach the step of washing the laundry, one or the other direction rotation of the inner tub and the pulsator are repeated for a predetermined number of times.

Lyu et al teach a method for washing laundry in a washing machine called penetration washing comprising the pulsator and the inner tub is rotated at high speed (Col.5, L.65-66). Note that the penetration washing is preformed repeatedly in regular and reverse rotation (Col.7, L.1-2).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the washing method of Thuruta et al and Park by adding the penetration washing method as mentioned in Lyu et al to obtain improvement in washing efficiency.

Regarding claim 16, note that washing the laundry is performed by stirring or agitating (2) (read as rotating the pulsator, Thuruta et al, Fig.10, #209, col.6, L.17-18).

Thuruta et al, Park and Lyu et al do not teach a method for washing laundry in the washing machine including the step of rotating the pulsator to wash the laundry after the penetration washing.

Since the criticality of recited steps is not shown on this record. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was

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made to rearranging steps to provide higher cleaning efficiency as rearranging the steps does not render new and unexpected result, consult *In re Burnhans*, 154 F.2d 690, 69 USPQ 330 (CCPA 1946).

18. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Thuruta et al (US 4,779,430) in view of Lyu et al (US 6,351,974) and Park (WO 03/080916) and in further view of Sonoda et al (US 6,826,932).

Thuruta et al, Park and Lyu et al do not teach a step of stopping the inner tub and the pulsator includes the step of supplying power to the motor for a preset time period to rotate the motor in a rotation direction opposite to the rotation direction of the motor in the step of rotating the inner tub and the pulsator in one direction.

Sonoda et al teach a method of stopping a motor comprising a step of rotating the motor in a direction opposite to the direction of the rotation which the motor is in rotation (Col.5, L.19-21). Note that power has to be supplied to the motor in order to actuate motor.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the stopping the rotation of the motor of Thuruta et al, Park and Lyu et al as mentioned in Sonoda et al to shorten a stoppage time for the inner tub and the pulsator.

19. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Thuruta et al (US 5,520,025) in view of Lyu et al (US 6,351,974) and Park (WO 03/080816) and in further view of JP 2003-10587.

Thuruta et al, Park and Lyu et al do not teach the step of rotating the pulsator includes the step of rotating the inner tub having no rotation force of the motor transmitted thereto together with the rotation of the pulsator in a direction opposite to the rotation direction of the pulsator by a principle of action-reaction with respect to the rotation of the pulsator.

JP 2003-10587 teaches a method for washing laundry in a washing machine wherein the step of rotating the pulsator includes the step of rotatively driving the agitation blade (read as pulsator, abstract) in such a manner that the tub (read as inner tub, abstract) is made free to rotate so that a reaction force reverse to the driving force of the agitation blade (read as pulsator, abstract; read as reaction force, abstract) is applied to spinning tub (read as inner tub, abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the step of rotating the pulsator of Thuruta et al, Park and Lyu et al as mentioned in JP 2003-10587 to reduce damages to clothes and entanglement thereof with necessary washing force maintained (JP 2003-10587, abstract).

Response to Arguments

20. Applicant's arguments with respect to claims 1-17 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

21. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to STEPHEN KO whose telephone number is (571)270-3726. The examiner can normally be reached on Monday to Thursday, 7:30am to 5:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Kornakov can be reached on 571-272-1303. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SK

/Michael Kornakov/

Supervisory Patent Examiner, Art Unit 1792